

## Abstract

A system and method for performing a hardware-in-the-loop simulation using a plurality of graphical programs that share a single graphical user interface. A first graphical program that models a physical system may be created. The first graphical  
5 program may be deployed on a first computer system for execution. A second graphical program that performs a measurement function may be created. A control unit may be coupled to the first computer system. The first graphical program may be executed on the first computer system to simulate operation of the physical system, wherein the control unit interacts with the first computer system. The second graphical program may be  
10 executed to measure characteristics of the operation of the control unit. A single graphical user interface comprising a first one or more graphical user interface elements for the first graphical program and a second one or more graphical user interface elements for the second graphical program may be displayed.